CradlePoint Provides Controlled Wireless Access to Crew of USS Enterprise

SUMMARY

The USS Enterprise (CVN-65), commissioned in 1961, was the world's first nuclear-powered aircraft carrier. When the ship was inactivated in Norfolk, VA in December 2012, most of the ship's company moved to land-based working and living quarters or other U.S. Navy vessels. For nearly 300 of the crew, however, a "berthing barge" docked adjacent to the carrier became their temporary home and workplace until they were detailed out.

Internet access was an essential component of the barge if it were to function as an efficient workplace and serve the recreational needs of the crew on board. To provide the crew with faster, controlled Internet access while aboard the barge, CradlePoint worked with solutions architect partner, 4K Solutions, to deliver 4G/LTE broadband wireless through the Navy's current cellular provider, Verizon Wireless. The berthing barge installation included CradlePoint MBR1400LE-VZ routers, CradlePoint WiPipe™ Central, and Wifi-soft wireless networks and hotspot systems management solution.

Solution: CradlePoint MBR1400LE-VZ Series Router, WiPipe™ Central

(4G/LTE) Internet Connection: Verizon Wireless Broadband Network

Application: CradlePoint MBR1400LE-VZ Series Router, CradlePoint WiPipe™ Central, Wifi-soft wireless networks and hotspot systems.

Market: Military

"With the CradlePoint solution, sailors aboard the barge now have a much faster, 24/7 connection to Internet and commercial email," said Lt. Young. "This means that the crew can get its work done during work hours, and have time to relax and enjoy online activities with their families afterwards."

BUSINESS NEEDS

Initially, the berthing barge was connected to the Internet via a T-1 line. Due to technical and operational constraints, effective connection speeds soon measured in kilobytes. Such slow connectivity hampered the sailors' ability to complete their work efficiently. But it also became a morale issue. The slower network performance impacted sailors' ability to manage personal business and communicate with friends and family back home.

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SOLUTION

To address this issue, Lt. Young first reached out to Verizon Wireless, its local cellular network provider. Once Verizon understood the Navy's needs it turned to CradlePoint, with whom it had worked in the past, to develop a turn-key solution for wireless access on the barge.

The Internet access solution's foundation rests on four CradlePoint MBR1400LE-VZ Series routers, with Verizon Wireless as carrier for the cellular backhaul. WiPipe™ Central, CradlePoint's cloud-enabled management and application platform, gives the USS Enterprise's communications staff the ability to remotely manage all four routers, including log-in authentication and system state.

The ship's staff also wanted the ability to create user profiles and to have a banner splash page to communicate usage requirements and restrictions. And since this would be a Navy-funded wireless access system, the communications staff also needed to control which URLs sailors could and could not access. To meet these specific needs, CradlePoint turned to Wifi-soft Solutions for a backend solution that ties into the CradlePoint's built-in radius server which enables the USS Enterprise Automation Department to authenticate each wireless client across the four CradlePoint routers.

BENEFITS

Ease of Implementation

One of the major reasons the U.S. Navy chose CradlePoint was because both organizations have an existing relationship with Verizon Wireless. CradlePoint working through partner 4K Solutions worked with the USS Enterprise Automation Officer and Verizon Wireless to quickly develop a turn-key package. 4K Solutions conducted the onsite berthing barge site survey, network design and architecture plan, staging and professional services coordination, and overall project management. The package also met Lt. Young's call for a solution that would reduce staff workload for purchasing, activation, system set-up, configuration, and delivery.

"CradlePoint response time was far quicker," said Lt. Young. "And where other vendors had questions, CradlePoint had solutions. Once I established a rapport with the CradlePoint representatives, it was simply a matter of getting the funding, then putting the devices in place and making them operational."

A Secure Solution

Before the USS Enterprise communications staff could introduce wireless access, it had to meet a number of security standards. To ensure security, CradlePoint's WiPipe™ Central incorporates a proprietary Access Management control mechanism, which provides an added level of security and protection regardless of encryption methodology. WiPipe™ Central is hosted at a Tier III datacenter, provides full redundancy with SSAE Type II certification, and guarantees 24/7 staffing.

Cloud-based Network Deployment & Management

When people accustomed to normal Internet connection speeds are subjected to far slower speeds, discontent can develop quickly. It was in the Navy's interest to resolve this issue—and to do it fast. WiPipe™ Central enabled rapid deployment of the CradlePoint devices. And once the CradlePoint routers were in place, WiPipe™ Central gave the Enterprise staff the tools it needed to manage the routers and network configurations as a group, and to automatically update firmware—again, as a group.

"With such a slow network, our sailors had to work longer to get their work done," said Lt. Young. "CradlePoint enabled us to correct this situation quickly so that the crew could get work done during work hours—and then relax and have fun afterwards."

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